Paper to Paperless, and the Paper In-between

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Paper to paperless, and the paper in-between. This title may sound like an oxymoron, but it is, in fact, a reflection of reality. Any facility making the transition to an automated point-of-care documentation system, is most likely struggling with intense paper processing, key indexing or scanning for document imaging systems, or filming associated with the increased paper output of bedside documentation systems. This article is designed to help you understand the challenges in preparing for the implementation of a point of care system, tips to avoid excessive paper production or data problems common to these type of systems, and questions to ask yourself as you begin to weed your way through the paper jungle on the way to the computer-based patient record (CPR).

An essential component of a true CPR is the implementation of clinical documentation system (automated nursing and physician notes and order entry). The deluxe versions automate features such as vital signs, graphic input/output forms, care and teaching plans, problem lists, medication records, and census-based staffing patterns. Challenges for the health information manager are: How much is enough documentation to meet the minimum needs of patient care, education, legal, reimbursement, and accreditation and licensure? What can we do to make the input, formats, and output of the data more useful?

No doubt our work is cut out for us.

Hinsdale Hospital, a 500-bed acute care facility, is in the process of completing the installation of a wireless (the devices look like six-pound Etch-a-sketches), touch screen, portable, clinical documentation system. Information is transmitted instantaneously from the bedside, hallway, nursing station, or other location via radio frequency to our minicomputer-based local area network.

Although we attempted to prepare and plan adequately to avoid a deluge of paper, we experienced a quadrupling of the amount of paper in the medical record. The impact on the HIM department of this increased paper load meant the following: (a) increased staff time in almost every function (assembly, analysis, coding, incomplete file processing, filing, etc.) for simply handling the paper; (b) increased storage and filming costs; (c) increased supply costs; (d) increased photocopy and fax costs; (e) decreased productivity in coding and abstracting, even though legibility may increase; and (f) increased frustration of physicians and reviewers when all documents suddenly begin to "look alike".

In order to implement a point-of-care documentation system which minimizes paper output, you must clear some major hurdles during its preparation. This includes the preparation of a data glossary (and you thought getting everyone in agreement with the old Joint Commission abbreviation list was a challenge). You must also determine which computer-generated documents will replace which forms in the paper record. You will need to assess the legal and use implications of document formats and content, authentication, processing, printing, and retention. During this preparation time of approximately one year, you should steadily communicate the impact of the new system, and involve all the appropriate personnel such as medical staff, purchasing agents, information services staff, and nursing staff for input. This is a critical step. If you can set up a demonstration system with comparisons of "before" and "after" formats, you can make the transition more meaningful to the end user. You must also budget for the increased cost of equipment - personal computers and printers, supplies, additional storage space, staffing, wiring, and filming. Now you can begin the real detail work.

The nitty gritty tasks of development for a point-of-care documentation system from an HIM perspective can be broken down into five major categories: (1) design, (2) content, (3) policy, (4) confidentiality, and (5) functionality. Each of these must be addressed with the particular needs of the facility in mind. Credentialed HIM managers' expertise in form design must be shared with the companies that are marketing point-of-care systems. The following checklist is designed to help you identify and address issues in each of the above areas.

Unfortunately, due to financial constraints, our facility is unable to use optical or other types of long-term storage which would facilitate data retrieval from an integrated database and eliminate the short-term problem of excessive paper. We view the current situation as a necessary (albeit painful) transition toward the goal of the truly paperless patient health record.

These questions, and many more, will continue to provide a forum for discussion and resolution as the world of manual documentation is replaced by automation and computer-generated charting at point-of-care. Knowledgeable and involved health information managers will impact decisions affecting efficient and quality patient care today and in the future. Get involved, educate others, ask the tough questions, and don't wait! Now is the time to start planning so the title of a future article could be "Paper to Paperless - We Saw the Forest for the Trees and We Saved It."

Checklist for Point-of-care Documentation System

Input and Output Design Issues

Type of paper and printer output:
____ Laser or inkjet
____ Single or double-sided forms
____ Multiform dot matrix
____ 5-hole punch for chart fastening
____ Vertical ____ Horizontal
____ Flow chart style:
How will multi-page continuations be numbered? If automated flowcharts are intermingled with manual flowcharts, how will they be stored and integrated in the record.
____ Is print size readable?
____ Is layout conducive to data collection and abstracting?
____ Color ink or paper needs
____ If you have a recycling program, can you still recycle this paper?
____ Where is identification data?
____ Do you still need a space for patient identification, addressograph, for example?
____ Borders
____ Size
____ Signatures ____ Initials
____ Data key code table for abbreviations
____ How are forms sequenced? Chronological or reverse chronological order? Is final print done at the time of discharge?
____ Are new dividers necessary?
____ Standard layout
____ Spacing
____ Titles
____ Name and logo of facility
____ Form identification number and print date

Data Content Issues

____ Information duplication:
____ on other forms
____ within the system or in relation to other systems
____ Is there clarity as to which form is used for what reference purpose?
____ Charting by exception
____ Critical path integration
____ Will fill-in text or manual corrections be allowed on final printed forms?
____ Have individuals who do data abstracting, utilization review, or auditing been trained to identify where to find information?

____ Can information be retrieved from the system at a later date and time? Can it be reprinted?
____ Are changes (corrections, deletions, additions) in your master patient index or abstracting system reflected in the point-of-care system after discharge if data is to be retrieved at a later time?
____ Do the recorded notes indicate the exact time of the event, or the exact time of the documentation of the event. (Our system can only collect one, not both!)
____ What is the impact on accuracy of data or legal implification if backdating is allowed for charting?

Policy and Procedural Issues

____ Who can enter documentation in the system?
____ Who can revise information?
____ How are corrections reflected in the record?
____ What is the printing schedule?
____ Midnights? Final copy or temporary? Where are thinned portions stored?
____ By shift? End of week? End of stay? Every 24 hours after admission? Who produces prints? Is it system-generated or command-produced?
____ How does reprinting work? Who is responsible for this task?
____ How is missing or discrepant documentation identified and reported? Who performs this task?
____ How are original reports (laser) distinguished from reprinted originals?
____ How can you tell whether the report has been edited on a supplemental copy? (Remember all laser copies look alike and essentially are originals unless identified otherwise!)
____ Are reprints retained in addition to the original or do they replace the original?
____ If no paper is generated, what is data validity and completeness process?
____ What is the downtime policy?
____ How is information integrated between manual forms and automated forms?
____ How often is information backed up? Is this a redundant "mirrored" system?
____ Who changes toner and paper on nursing units?

Confidentiality Issues

____ What is the security and confidentiality protocol?
____ Is the system being used as a nursing board (no sign on required) to view basic patient information including who is in each room?
____ Do patients have access to this system if it is present in their room?
____ Where are the devices and or terminals kept?
____ How long is information retained online?
____ Can data be reviewed online? By whom? How long after discharge can this review take place? Can data be edited after discharge?
____ How often is information transferred to other data systems?

Functionality Issues

____ Are devices portable? The advantage of nonstationery terminals is that they can be carried to bedside for actual point-of-care documentation.
____ Cleanliness (infection control) issues
____ Lighting
____ Level of nursing and physician typing and PC skills
____ How is staff trained? Is your staff trained?
____ What information is integrated and interfaced?
____ Are results from other systems such as lab and radiology available online through review? Can these results be printed?
____ Is there a downtime interface to the master patient index so patients admitted, discharged, or transferred through the point-of-care system can carry over to the health information system upon recovery?

_____ Charges
_____ Barcoding accessibility
_____ Is there increased space on nursing units to accommodate thickness of charts in binders? Thinned charts?

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